
Object Function Listing for LEGO Rock Raiders V2.0

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Index

Buildings

Communications/Geological Centre p.4.

Barrack p.4.

Teleportation Pad (Levels 1, 2 and 3) p.5.

Ore Refinery p.5.

Repair/Upgrade Centre p.5.

Dock p.5.

Crystal Refinery p.6.

Base Defences

Small Mining Turret p.6.

Large Mining Turret p.6.

Dirt Barricade p.6.

Solid Rock Barricade p.6.

Electrical Fence p.6.

Other Constructions

Remote Teleportation Unit p.6.

Vehicles

Small Vehicles

Small Hoverboard p.7.

Small Digger p.7.

Small Catamaran p.8.

Small Transport Truck p.8.

Small Helicopter p.8.

Medium Vehicles

Bulldozer p.8.

Walker Digger p.9.

Mobile Weapons Platform (MWP) p.9.

Heavy Mobile Weapons Platform (HMWP) p.9.

Large Vehicles

Large Driller p.10.

Large Hovercraft p.10.

Large Helicopter p.10.

Creatures

Rock Monster p.11.

Ice Monster p.11.

Lava Monster p.12.

Lurker p.12.

Slimy Slug p.12.

Scabby Scavenger p.12.

Scorpion (Boss) p.13.

Scorpion (Minion) p.13.

Spider (Boss) p.13.

Spider (Minion) p.13.

Snake (Minion) p.13.

Bat p.14.

Other Creatures

Rock Whale p.14.

Cavern Shark p.14.

Armoured Dillo p.14.

Glossary p.15.

Object Functions in Detail

Buildings

Communications/Geological Centre

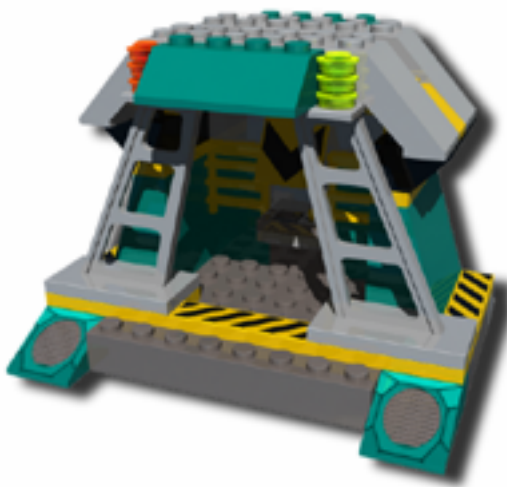
Dependant on other structures for creation	YES Teleport Pad	Upgradable	YES
Upgrade Level	BASIC (no upgrade)	INTERMEDIATE	ADVANCED
COST (Crystals/Ore)	(300/200)	(100/75)	(125/100)
Scanning Radius in Blocks	6	10	15
STRENGTH	150	Defenses	NO

Functions

- The Communications/Geological Centre is required for all scanned territory information to be displayed in the radar portal (currently top right in the game).
- It is also required to get helpful information such as 'radio' help messages from the minifigures in the game. These are messages such as, "I'm under attack." "I can't drill through here." "I've reached a lava flow, any new orders?" These will be displayed as small animation and sound files also as a text message that will appear in the text panel (see GUI design document.)
- It is not dependent on any other building in order to function although the player will need a teleport pad to create it.
- This building has three possible states of upgrade, these are:
 - Basic Level – Able to scan all excavated tunnel systems
 - Will relay communications and help messages from minifigures
 - Will display all scanned areas
 - Has its own small radius of scanned terrain
 - Will display the location of all Rock Raider objects
 - Intermediate Level – *As Basic but also:*
 - Increased Scanning area
 - Will display areas containing Crystals and Ore
 - Advanced Level – *As Intermediate but also:*
 - Increased Scanning area
 - Will display the location of all alien creatures
 - Will display location of water and lava
- Upgrades must be created sequentially. That is, only the 'Basic Level' can be created first, followed by the 'Intermediate' and then 'Advanced'. The player will not be able to start at any level other than 'Basic' and not go to 'Advanced' without going through 'Basic' and 'Intermediate' levels.
- The Communications/Geological Centre is not heavily defended and must be guarded by the player against attack at all times.

Barrack

Dependant on other structures for creation	YES Teleport Pad	Upgradable	YES
Upgrade Level >	BASIC (no upgrade)	INTERMEDIATE	ADVANCED
COST (Crystals/Ore)	(250/250)	(75/75)	(100/100)
Effect on minifigures	Restores energy at 5 points per 25 frames No Upgrade Ability	Restores energy at 7 points per 25 frames Upgrade to Level 2	Restores energy at 10 points per 25 frames Upgrade to Level 3
STRENGTH	175	Defenses	NO



Functions

- The barrack is a small building used to upgrade minifigures to a higher level of skill and competence. The basic process is to select a minifigure and then click on the upgrade icon in the bottom right of the screen. The minifigure will then make his/her way to the barrack. (See GUI design document for full details).
- Minifigures have a general health value that is decreased following attack from creatures or natural disasters such as rock falls, lava or water. This value can be returned to its maximum by selecting it and moving it to the barrack. (See GUI design document for full details).
- Minifigures can only enter one at a time.
- The barrack will have one standard level; and

two upgrade levels:

1. Basic Level – Does not upgrade a minifigure; only restores health.
2. Intermediate Level - Upgrades your minifigure to grade 2
3. Advanced Level - Upgrades your minifigure to grade 3

Information concerning the nature of these grades is contained within the minifigure section.

Note: We need to decide how to represent an upgraded minifigure in comparison to a non-upgraded minifigure. Possibly the easiest way would be a texture change, however this would have to be clearly visible from all angles and scales.

Teleportation Pad (Levels 1, 2 and 3)

Dependant on other structures for creation	NO	Upgradable	YES
Upgrade Level >	BASIC (no upgrade)	INTERMEDIATE	ADVANCED
COST (Crystals/Ore)	(500/400)	(200/150)	(250/200)
Teleport Ability	Minifigures and all small vehicles*	As BASIC but also all medium vehicles	As INTERMEDIATE but also all large vehicles*

*Small Catamaran and Large Hovercraft require a dock. These waterborne vehicles are teleported directly to the dock rather than the Teleport Pad.

STRENGTH	200	Defenses	NO
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Functions

- Without it the player will not be able to teleport new minifigures, vehicles, buildings or equipment. (This structure replaces the 'Construction Yard' in C+C.)
- The teleport system is not instantaneous; larger objects will take longer to teleport down (or construct) than smaller ones. This will be represented by longer teleport animations for larger vehicles.
- The base upon which the Teleport stands will be the same for all three levels. However, the teleport area, which is denoted by the pylons, enlarges to cope with the larger units that will be teleported down.

1. Basic Teleport

The basic teleport consists of the basic corner unit (FUTURA Model) and a perimeter denoted by three corner pylons. The basic teleport will be able to teleport all minifigures and any of the small vehicles.

2. Intermediate Teleport

This structure looks similar to the first except for the larger area it takes up and larger corner pylons. The Intermediate Teleport will be able to teleport all medium sized vehicles. Any object available through the first level teleport will be teleported more quickly.

3. Advanced Teleport

This structure, again, looks similar to the first except for the larger area it takes up and larger corner pylons. The Advanced Teleport will be able to teleport all large vehicles. Any object available through the first and second level teleport will be teleported more quickly.

Ore Refinery

Dependant on other structures for creation	YES Teleport Pad	Upgradable	NO
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COST (Crystals/Ore)	(100/75)
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STRENGTH	100	Defenses	NO
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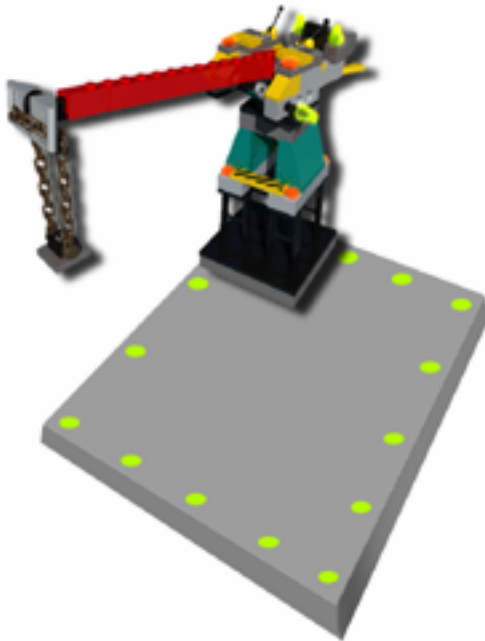
The Ore Refinery consists of the original FUTURA Model, which is placed over an Ore storage facility. This building has no upgrade ability although the player will be able to construct more of these facilities if there needs to be an increased rate of Ore refined. These facilities have to teleport their load back up to the Explorer when they are full. This process requires Power Crystals for the teleport energy. If the player does not have enough crystals the refinery will stop until more are mined. A player can choose to teleport or empty an Ore refinery at any time providing that the base has sufficient power. One reason for doing this would be if the building has come under heavy attack from an Ore munching creature.

Repair/Upgrade Centre

Dependant on other structures for creation	YES Teleport Pad	Upgradable	NO
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COST (Crystals/Ore)	(100/75)
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STRENGTH	175	Defenses	NO
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This building is essential for the repair and improvement of all the vehicles in the game. The structure consists of the crane (FUTURA Model) in the corner of a large area mapped out by small green light elements. Once the vehicle and the chosen upgrade has been selected that vehicle will make its way to the upgrade centre where it will position itself under the crane arm. The upgrade appears at the end of the crane, which moves it to the corresponding part of the vehicle. This upgrade object can then be parented to the original vehicle or the whole object replaced by the upgraded version. Engineers can do vehicle and building repairs in the field, however any vehicle returning to this structure will be repaired much more quickly. The repair process is shown by the perimeter lights flashing on and off. When the repair is complete the lights stop flashing. The crane element is not needed for the repair of vehicles except for the replacement of the large drill element on vehicles such as the Walker and Large Driller. Drills can be sharpened in the field by engineers but again this will take much longer.

Dock

Dependant on other structures for creation	YES Teleport Pad	Upgradable	NO
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COST (Crystals/Ore)	(450/500)
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STRENGTH	200	Defenses	NO
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Docks are the only buildings that must be placed half on land and half in water. Docks are also required for teleporting water-based craft down to the current level and for the repair of those vehicles. Docks are staging posts for the collection and retrieval of small vehicles and minerals such as Ore and Power Crystals. A dock is essential when a mining operation has to cross an expanse of water.

Crystal Refinery

Dependant on other structures for creation	YES Teleport Pad	Upgradable	NO
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COST (Crystals/Ore)	(75/100)
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STRENGTH	175	Defenses	NO
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The Crystal Refinery is essential for the processing of Power Crystals and energy level of the base. Like the Ore Refinery, this building is not upgradable. Further Crystal Refinery's must be constructed to process Crystals at a greater rate. As Crystals are emptied into the refinery's bucket they are passed into the teleportation/refining bay, from here they are teleported back to the Explorer and are available to the player in order to complete the level.

Ore Storage Dome
(See Ore Refinery)

Base Defences

Small Mining Turret

This structure can be built anywhere on the base. Its primary function is to break down the Ore and Crystals into a form easier to process by the relevant refineries. Trucks laden with Power Crystals or Ore pass below these towers which fire a laser into the cargo area breaking down whatever is being carried. When the cargo is emptied into a refinery it only requires 60 per cent of the normal processing time. Creatures on the planet will do their best to avoid the lasers that break down the Ore and Crystals. They are harmless to minifigures but give other creatures a nasty headache.

Large Mining Turret



The Large Mining Turret is the same structure provided by FUTURA. It provides exactly the same function as the smaller version but has a much greater range so that vehicles do not need pass quite so close to the tower so that the cargo can be broken down.

Dirt Barricade

The dirt barricade is constructed by minifigures and by the Bulldozer. The player will be able to select which unit is to be involved in the construction and then mark out the blocks required for barricades. The relevant unit will commence the construction of the barricade. The Bulldozer will be able to construct a barricade within 25 per cent of the time of a skilled minifigure.

Solid Rock Barricade

The Solid Rock Barricade can only be constructed by the Bulldozer. This process is described above.

Electrical Fence

The Electrical Fence is the most efficient of the base defences with respect to keeping out unwanted creatures. The Rock Monster is unable to pass through an Electrical Fence, however the Slimy Slug and the (Armoured-Dillo) will draw energy from it, which is then taken from the total for the base.

Other Constructions

Remote Teleportation Unit

This unit can be created either by the Engineer or the Geologist and is used to teleport minifigures from one side of the level to the other. Remote teleport units can also be constructed onboard the Explorer and sent down to the main teleportation pad to be transported by a small Truck or similar transport vehicle. This may be preferable when the player has no Engineer or Geologist available.

Remote Tool Unit

This is used by minifigures to repair their current mining tool. Lump hammers, picks, circular saws and jackhammers will become blunted through excessive use, especially if the player asks a minifigure to drill impenetrable rock. For a small fee the minifigures can check in their old tools and get a new one of the same kind. This will restore the tools' efficiency to 100 per cent. More advanced tools such as the circular saw and the jackhammer require the minifigure to be upgraded before it can be used. Note: Minifigures are selected and upgraded at the barrack

Example of Basic Tool Progression

HAMMER	Minifigure Level 1	Basic Speed Reinforcements
PICK		Basic Speed Digging
CIRCULAR SAW	Minifigure Level 2	Advanced Speed Reinforcements
JACKHAMMER		Advanced Speed Digging

Vehicles

Small Vehicles

Small Hoverboard



The Small Hoverboard is a fast scout vehicle and a single minifigure transport. The Small Hoverboard moves quickly over both rough and smooth terrain. The Small Hoverboard cannot travel over water or lava.

Function Table

Teleport time – put this in a table with the other object stats.

Basic Configuration	The Small Hoverboard is only capable of transporting one minifigure over solid terrain it has no scanning capability.
Upgrade – SPEED	The speed upgrade is denoted by two extra red light elements placed at the rear of the vehicle.
Upgrade – SCANNING	The scanning upgrade is denoted by the 'binocular' element fixed to a light grey lamp element that moves in front of the minifigures' face when in operation AND two extra headlights (green) at the front.
Upgrade – TRANSPORT	The Small Hoverboard is fitted out with the small cargo bin added to the rear of the vehicle. It is able to carry one Ore and five Crystals.

Small Digger



The Small Digger is a basic drilling vehicle that is capable of mining through all types of drillable rock at varying speeds (hardest = slowest). The Small Digger travels more quickly over smooth terrain (i.e. that which the Bulldozer has cleared) and more slowly over rough, freshly excavated terrain. It carries one minifigure. This vehicle has a special attachment that enables it to be carried by the Large Helicopter. Its speed is slower than that of the Small Truck.

Function Table

Basic Configuration	The Small diggers' primary function is the excavation of rock. It can also carry two Ore and ten Crystals in the cargo bin.
Upgrade – SPEED	This vehicle gains one extra axle and two more wheels between the original axles and wheels.
Upgrade – SCANNING	The scanning upgrade is denoted by the 'binocular' element fixed to a light grey lamp element that moves in front of the minifigures' face when in operation.
Upgrade – DRILLING	The two smaller chainsaw drills are replaced with one of the large chrome drill elements. This means that it will have to be carried perpendicular to the Large helicopter.

Small Catamaran

The Small Catamaran is the smaller of the two water-based craft. The Small Catamaran is primarily a transportation vessel: a water-based version of the small truck



Function Table

Basic Configuration	In its basic form the Small Catamaran has no other function than transport mined materials and one minifigure.
Upgrade – SPEED	A large brown propeller is added to the rear of the vehicle: in a similar fashion to the American swamp boats of the Everglades.
Upgrade – SCANNING	A large radar dish is also added to the rear of the vehicle using the same structure as the SPEED upgrade.
Upgrade – TRANSPORT	In the same way as the Small Transporter Truck, two cargo bins are added side by side to replace the existing single cargo bin.

Small Transporter Truck

The Small Transport Truck is the basic workhorse of the Rock Raiders vehicles. Transporter trucks are essential to an efficient mining operation. With a crew of one minifigure these vehicles can move over any rocky terrain.

Function Table

Basic Configuration	The Small Truck is capable of carrying two Ore and ten Crystals
Upgrade – SPEED	Two dark grey 'jet' elements are added to the sides of the body. Speed is increased over both terrain types.
Upgrade – SCANNING	The scanning upgrade is denoted by the 'binocular' element fixed to a light grey lamp element that moves in front of the minifigures' face when in operation.
Upgrade – TRANSPORT	Two cargo bins are added side by side to replace the existing single cargo bin.

Small Helicopter

The Small Helicopter performs a similar function in the air as the Small Truck and Small Catamaran performs on land and water respectively. The Small Helicopter is able to cross all types of terrain including lava and water. With a crew of one minifigure, this craft's primary function is reconnaissance.

Function Table

Basic Configuration	The Small Truck is capable of carrying two Ore and ten Crystals
Upgrade – SPEED	The engine block at the rear of the vehicle is increased and an extra brown rotor is added.
Upgrade – SCANNING	The scanning upgrade is denoted by the 'binocular' element fixed to a light grey lamp element that moves in front of the minifigures' face when in operation.

Upgrade – MINING	The Small Helicopter is equipped with a small mining laser.
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Medium Vehicles

Bulldozer



The Bulldozer has many roles to play in helping the Rock Raider team. Its primary function is to clear the debris left by mining. This allows vehicles to drive over the terrain at a greater speed and thus increases the efficiency of the whole operation. The Bulldozer is also required to create soil and rock barricades (see section on Base Defences). Although minifigures are also able to create soil barricades, the Bulldozer can complete the same task in a fraction of the time. Only the Bulldozer is powerful enough to build rock barricades. The Bulldozer also decreases the time taken to create a base for a building. Again, minifigures are able to perform the same task but it requires a number of them to complete the job in the same time as a Bulldozer. The Bulldozer can also scoop up minerals such as Ore and Crystals although they will have to be

dropped in order to perform one of the previously mentioned tasks. Finally, the Bulldozer is also useful in defending the base against attack from the various creatures that inhabit the planet. However, any attack made by creatures to the sides or rear of the Bulldozer will result in heavy damage.

Function Table

Basic Configuration	The Bulldozer has the ability to use its bucket in a wide variety of ways.
Upgrade – SPEED	A large spoiler is added to the rear of the vehicle to show an increase in engine power.
Upgrade – TRANSPORT	Two small transport bins are added to the rear of the vehicle thus making it possible for the Bulldozer to transport minerals and still use its main bucket for other tasks.
Upgrade – MINING	The Bulldozer is equipped with a small mining laser.

Walker Digger

The Walker is a specialised mining vehicle that has little trouble negotiating rocky, freshly excavated terrain. It is much faster than the Bulldozer and the Large Driller although it does not possess the ability to transport mined materials.

Function Table



Basic Configuration	The Walker is a fast moving and powerful all terrain drilling machine.
Upgrade – SPEED	Two extra engines (circular, turquoise element) are added to the rear to compliment the existing pair.
Upgrade – MINING 1	The first option is the addition of a small mining laser to the top of the vehicle. This does not improve drilling speed as much as option 2, but does allow the vehicle to defend itself from all sides.
Upgrade – MINING 2	The second option is the addition of a chrome drill element to the front of the vehicle that replaces the centrally placed single drill element.

Mobile Drilling Platform (MDP)



This vehicle is used in much the same way as the Small Digger. Without any mechanical drilling equipment, the MDP does not need repairing as with other vehicles. It will however need recharging by placing a new Power Crystal inside it. Note: when the MDP's energy is low the player will still be able to move it although the mining lasers will be temporarily out of action. The MDP is expensive but does possess the ability to fire its mining laser in any direction making it quite difficult for creatures to sneak up on it.

No Upgrades Available.

Large Vehicles



Heavy Mobile Drilling Platform (HMDP)

The HMDP is the big brother of the MDP and possesses very similar attributes. However, the player will need to replace more Power Crystals and more often to keep this giant's lasers in full operation. As one of the most expensive technologies to build the player will have to work hard to save enough Ore and Crystals to have one of these vehicles teleported down to the level.

No Upgrades Available.



Large Driller

The Large Driller is the king of excavation. Slow moving but even hard rock seems to melt when it is upgraded to full power. The Large Driller is a

superb all round vehicle with the ability to drill hard rock, scan long distances and carry heavy loads and has a large mining laser. With a crew of two this is another very expensive vehicle to create. The Large Driller moves much more easily over ground flattened by the Bulldozer.

Function Table

Basic Configuration	The Large Driller is a slow vehicle with excellent all round ability.
Upgrade – SPEED	The engine just behind the cab is pulled out and replaced with a huge wider and taller one.
Upgrade – SCANNING	The scanning pod is replaced with a wider one that has an increased range.
Upgrade – MINING	The scanner on the right front of the vehicle is moved to the top of the vehicle and a second chrome coloured drill element is added.

Large Hovercraft

The largest water-based craft, this vehicle is able to transport cargo, minifigures and small vehicles from one side of lakes to the other. Cheaper than the Large Helicopter

Function Table

Basic Configuration	
Upgrade – SPEED	The Large Hovercraft gains two small, black, circular rocket engines to the sides of the rear spoiler.
Upgrade – SCANNING	A large scanner is added centrally to the top of the rear spoiler.
Upgrade – MINING	Two small mining lasers are added to the sides of the craft.

Large Helicopter



The Large Helicopter is primarily a transport drop ship. It is able to carry cargo and small vehicles over water, lava and land. Due to its large size this vehicle requires tunnels at least five blocks wide to travel down or the rotors smash upon the steep sides of the tunnel. Note: This figure may change as we develop ceiling code.

Function Table

Basic Configuration	The Large Helicopter is able to carry one large cargo bin or one vehicle.
Upgrade – SPEED	The Large Helicopter gains two extra small, black, circular rocket engines to the rear.
Upgrade – SCANNING	A large scanner is added centrally to the top of the rear spoiler.
Upgrade – TRANSPORT	Two extra brown rotors are added to the rear spoiler and two cargo magnets are added to replace the centrally placed single one.

Creatures

Rock Monster

The Rock Monster is the main foe of the LEGO Rock Raiders. A Rock Monster will show no fear in attacking any vehicle or defence. However if any mining tool repeatedly hits it, it will eventually give up the attack and retreat. The Rock Monster is able to move through rock walls at will although it will slow down as it passes through the rock. It will consume unguarded crystals[°] and is more persistent in its attack if it is close to a Crystal deposit. Generally slow moving but do not get complacent as these giants deliver a heavy blow once in range.

Speed	5/10
Speed through rock	3/10
Armour	90/100
Damage from Pusher Gun (small)	10/100
Damage from Pusher Gun (large)	20/100
Damage from Laser (small)	10/100
Damage from Laser (large)	16/100
Damage from Freeze Ray (small)	07/100
Damage from Freeze Ray (large)	15/100
Hit strength – FIST	30/100
Hit strength – KICK	20/100
Hit strength – BOULDER THROW	25/100

Ice Monster

The Ice Monster is a cousin of the larger Rock Monster. Made completely of ice it is only found in the coldest areas of the planet. Just like it's larger relative, the Ice Monster has the ability to move through walls at will. As it is less dense than the Rock Monster, moving through walls does not slow it down quite so much. Pusher weapons force these creatures to slide across the floor, as there is little friction between the floor and their feet. This creature has the ability to temporarily freeze any water with his icy breath; it is a great way to cross a lake if you can push him with your pusher beam tools. If you can push him into a lava pool, then the lava will be temporarily turned to rock. But be careful, it will not stay as rock for long and the Ice Monster will not be tricked so easily the next time. An ice monster loves the lovely cold freezer ray and even gains energy from it! However, one look at a laser is probably enough to send it running, make sure that your minifigures are properly equipped for the icy levels.

Speed	5/10
Speed through rock	4/10
Armour	60/100
Damage from Pusher Gun (small)	10/100 (-5 for slide >5 blocks into a wall)
Damage from Pusher Gun (large)	20/100 (-7 for slide >5 blocks into a wall)
Damage from Laser (small)	20/100
Damage from Laser (large)	28/100
Damage from Freeze Ray (small)	00/100 (+4 added to its armour score)
Damage from Freeze Ray (large)	00/100 (+8 added to its armour score)
Hit strength – FIST	30/100
Hit strength – KICK	20/100
Hit strength – BOULDER THROW	25/100

[°] A proposal pertaining to the execution of resource consumption can be found at the end of this document and will be incorporated into its own document at a later date.

Lava Monster

The Lava Monster is the third member of the 'Monster' family and definitely the most 'hot tempered'. He loves to bathe in red-hot lava pools and rarely leaves them as the air is generally too cold. If the Lava Monster is tempted away from his lava pool for very long he will start to cool and go solid. Unfortunately, the Lava Monster is so adapted for life in the lava pools that he finds it extremely difficult to move in his solid form. So much so that he will eventually crack and crumble if he does not return to the lava pools to warm up. While in his lava pool this creature is very difficult to defend against, he will hurl huge balls of molten lava at any minifigure or vehicle that disturbs him. Unlike his cousins, the Lava Monster cannot move through any rock unless it is molten. The pusher beam has little effect on him and the rock laser increases his energy. However defend yourself with a freezer ray and you'll have dramatic results. If you can, force him into water flows or a lake and he will certainly leave you alone.

Lurker

The Lurker is an unintelligent and generally peaceful creature. The worst thing about the Lurker is his curiosity and his love of the new and colourful LEGO that the Rock Raiders have brought with them. Generally the Lurker is a shy creature and will hide from areas bustling with minifigures and noisy drilling equipment. However, any unguarded equipment will be taken apart by the curious Lurker. His favourite hiding place for all his 'LEGO treasure' is around the rocky water filled pools in which he sometimes hides. The Lurker will also move any excavated Ore that is left unattended.

Technical Note:

The Lurker will attack vehicles with upgrades, as these are all ready separate objects. Buildings with animated parts can also be detached, as they are also separate objects. The LEGO will disappear from the building or vehicle and appear in the hands of the Lurker. Null frames in the Lurker animation will set positions for the detached LEGO. The objects will then scale down into the clasped hands of the Lurker to be replaced by the LEGO Ore object. 'Fairy dust' effect compulsory for the transformation of LEGO upgrade to basic Ore. The Lurker will then carry the basic Ore object.

Slimy Slug

The Slimy Slug is a strange creature that inhabits the underground tunnels of the planet. The Slimy Slug thrives on the power generated from Power Crystals and is not fussy about from where it drains the power. Unattended power crystals, vehicles and buildings are all targets for this hungry little creature. Electrical fences will stop almost every creature except the Slimy Slug who will simply drain its energy. The Slimy Slug has spots running along its back that store the drained energy. The more energy the slug drains, the brighter the spots become. That's not all, with increased power the Slimy Slugs become super-charged and whiz around the caves at breakneck speeds. The Slimy Slugs also have a nasty habit of leaving pools of slime that cause minifigures and vehicles to become stuck. The player must stop the Slugs from getting to an energy source or they could easily overrun the whole level.

Scabby Scavenger

The Scabby Scavenger is a fast moving creature that loves to scavenge anything it can get its claws on: whether it is Ore, Power Crystals or LEGO equipment. This creature loves to sneak up on solitary minifigures and jump on them in order to steal their drilling equipment. Anything too big to carry, the Scabby Scavenger will resort to kicking it with its long hind legs. Generally a Scabby Scavenger will not attack a large base whilst on its own, however where there are two or more they will attack in packs.

Technical Note

The Scabby Scavenger will reduce a minifigures upgrade level by one if it succeeds in knocking a minifigure over and stealing a piece of equipment. This will be shown by placing an object such

as a pickaxe or circular saw next to the minifigure that the Scavenger will 'pick up' and run away with. The minifigure will have to return to one of the remote tool stations to get his upgrade back.

Scorpion (Boss)

The large Scorpion is a formidable foe and will attack even the 'Large Driller' and 'Bulldozer' with its huge claws. It is difficult to push with the 'Pusher Ray' and the 'Rock Laser' just makes it even more hot tempered. However, the large Scorpion hates the cold and any bright lights. This means that the freezer ray and dynamite work well against the Scorpion. Don't let the large Scorpion get too close to your buildings or it will make short work of destroying them. Bulldozers with engine upgrades are able to push the large Scorpion away but they will need an engineer to repair them afterwards! The best defence against these huge creatures is a mobile drilling platform equipped with freezer rays.

Scorpion (Minion)

The smaller and less powerful scorpions are found throughout the caves and tunnels of the (planet). They are usually scattered, however where their numbers become more dense, there is a big possibility that a Large Scorpion is close by. Scorpions are generally an annoyance to minifigures and nip at their feet with their small pincers. If they sting a minifigure he will become drowsy for a second or two and lose some energy. A single Scorpion does very little damage but enough of them will make even the bravest minifigure feel ill and force them to teleport back to the Explorer. These creatures have no effect on vehicles or buildings.

Spider (Boss)

The Large Spider is another formidable creature who lurks in the darkest caves and tunnels. These large spiders are able to spin huge webs that are capable of blocking a small tunnel. Unwary minifigures and small vehicles can get caught in these webs and will need rescuing by a friend with a rock laser. Unlike the Large Scorpion, the cold freezer ray has little effect; it is the rock laser that this creature fears most. The Large Spider will also spin its web over any unguarded vehicles and buildings reducing their efficiency.

Technical Note:

Webs will consist of single triangles mapped with a pen zero texture to represent the actual web. Null objects may have to be included in the stationary scene files of vehicles and to those scenes containing buildings. These will act as reference objects for the placing of web objects and their orientation.

Spider (Minion)

Small spiders are similar in behaviour to the small scorpions, they are relatively harmless on their own and they will scurry away from large vehicles. However they can shoot out a small web and if there are a number of them they can soon tie up a minifigure and leave him stranded. If you do come across a number of these small creatures be careful as

Snake (Minion)

The snake is a venomous creature that slithers along the cave floors. Although its bite has a greater effect than the attack of the small spider and the small scorpion the snake is caught out far more easily by the minifigures drilling tools such as the rock laser, pusher and freezer rays. Fortunately, for the minifigures the snakes do not grow any larger unlike the small scorpion and spider. The snake will sometimes lie in wait, curled up into a ball that almost looks like a rock. From this position it strikes out at unwary minifigures making them dizzy for a short time. Again, if the minifigures become too dizzy they will be forced to teleport back to the Explorer.

Bat

The bats that fly around the tunnels and caves are a real nuisance to the busy minifigures. Although they do not cause much harm, they 'buzz' around the minifigures' heads distracting them from their work. This leaves them more vulnerable to attacks from the more dangerous creatures such as the rock monster. They can be shooed away after a few seconds but that may be all the time another creature needs to move in.

Other Creatures

Rock Whale

The Rock Whale is a huge slow moving creature that acts almost like a mobile wall! The Rock Whale loves to munch on LEGO Ore almost like a large cow would eat grass. The Rock Whale is almost impossible to move when it decides to settle down to sleep. Enough exposure to heat will wake it. However, be careful as the Rock Whale does get very cranky when it has been woken before it is ready: it will butt any vehicle or building when it is in a bad mood. Rock Whales can be made to fall asleep through the use of Freezer Rays although they will, again, wake up in a bad mood. This can be useful when you want to block off a tunnel to stop creatures getting through. If you don't have a Freezer Ray just put down some Ore and the Rock Whale will lumber over to eat it before having a quick snooze, this way the Rock Whale will wake up happy.

Cavern Shark

The Cavern Shark is one of the few creatures that live entirely within the rock pools and rivers of the underground world. They will attack any water-based craft that they come across probably because they think its some kind of food. They can be turned into big ice cubes by Freezer Rays and Pusher Beams will cause a wave that carries them away. Rock Lasers will get the Rock Sharks steamed up and make their attacks even more frenzied. They can be easily distracted by Power Crystals thrown into the water, the Rock Sharks home in on the bright glowing objects just long enough for a quick getaway.

(Armoured-Dillo)

This creature is one of the strangest of them all, brightly coloured, the (Armoured-Dillo) thrives on energy of any type. Hit by the Freezer Ray it turns blue and rolls into a ball to make its attack, the effect is like a snowball freezing anything it hits. Hit by the Rock Laser it will glow red and roll up like a ball of lava to make its attack. Pusher Beams are a good defence against these creatures especially when they are rolling along. They can be diverted and rolled into a lake to cool off or into a nest of spiders to disperse them. A rock Monster will be far less impressed by a minifigure sending an (Armoured-Dillo) rolling toward him: Rock Monsters have been known to simply pick them up and throw them like rocks making them even more destructive to minifigure buildings and vehicles.

Glossary of additional features described in this document

☛ (Page?) Proposal for Resource consumption by Creatures.

It has been correctly pointed out that if creatures, such as the Rock Monster and Lurker, consume valuable resources required by the player to complete a specific level then some allowances have to be made. Unlike 'Tiberium' in C+C, Crystals and Ore do not 'grow back' and they can not be captured back from a creature once consumed. As they are minerals, once they are consumed, they are gone. If creatures on a level go unchecked and they are allowed to roam around and consume indiscriminately, then through no fault of their own the player could find that they are unable to complete a level no matter how quickly they excavate.

There are several things that we can look at to make sure that this does not happen:

1. Firstly, when a level is designed the total number of Ore and Crystals are in excess of those needed to complete the level. When a level is tested to see how many crystals and units of Ore will be required to build the necessary objects and make a few mistakes along the way, that number is increased by 20% thus allowing for consumption by creatures.
2. As the number of Ore and Crystals reduces i.e. the number nears the minimum number required to complete the game; the feeding habits of the creatures slow down (as they are getting full) so that the player is more likely to reach the quota.
3. Only resources uncovered by the player i.e. those that are visible to him/her, can be consumed by creatures. The creatures will not consume any that have been placed in the level editor and have not been uncovered/excavated.
4. There has also got to be ways in which the player can lose a level. If a player uncovers a large deposit of a needed resource and does not make an effort to either transport them quickly back to the base or defend them until a suitable transport vehicle arrives, then they can expect that resource to be consumed by creatures.
5. The rate of consumption and the amount of specific resources are also dependent on the difficulty setting of the current game.
6. The fact that the player can lose a specific level if they do not manage their resources correctly and leave them to be consumed by creatures can also be described in the manual, the tutorial levels and by the Advisor on an Easy difficulty setting game.

We could further this 'Easy difficulty' approach by not allowing the creatures to consume more than the minimum level requirement on a level, allowing inexperienced players the opportunity to finish the stage at a slower pace, perhaps shifting the emphasis on exploration and collecting, rather than on combat.

(Page?) Minifigure grades.

Further information concerning the exact nature of each minifigure and their upgrade abilities will be discussed in a further document.